

ABSTRACT OF THE DISCLOSURE

In a method for performing a plasma-assisted treatment on a substrate in a reactor chamber by: introducing at least one process gas into the reactor chamber; and creating a plasma within the reactor chamber by establishing an RF electromagnetic field within the chamber and allowing the field to interact with the process gas, the electromagnetic field is controlled to have an energy level which varies cyclically between at least two values each sufficient to maintain the plasma, such that each energy level value is associated with performance of a respectively different treatment process on the substrate.